remain bullish on the fundamentals. Demand remains intact across virtually every sector, and supply is in check with only a couple of submarkets meriting slight concern. Cash flows are highly visible and predictable due to the nature of the lease terms, which serves to reinforce the stability of a REIT investment.

Convergence Is Taking Place

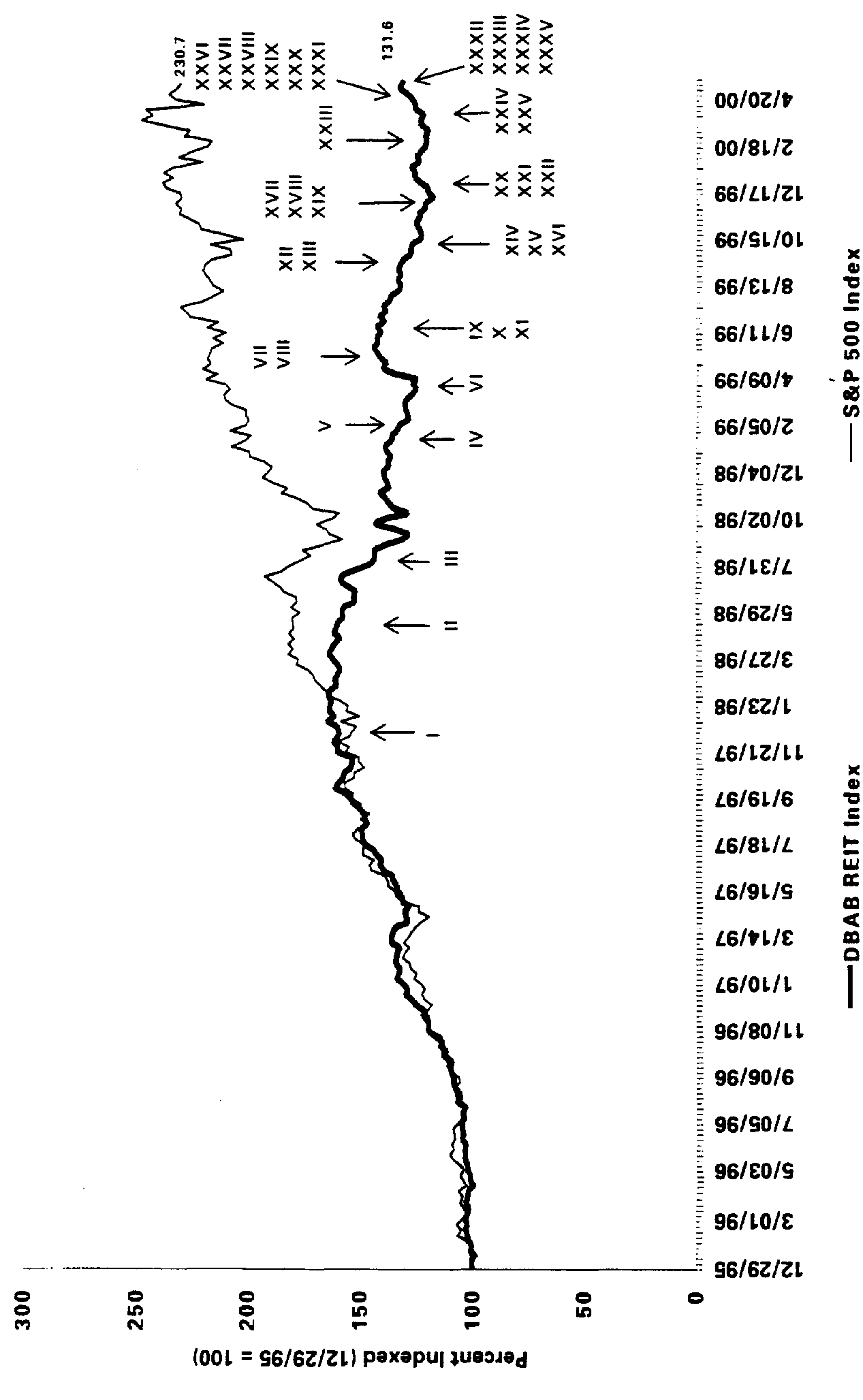
We think that a real estate/technology convergence is occurring based on the trends and actions we are observing and analyzing:

- Many revenue-sharing arrangements, especially with telecom service providers, have been formed. Some arrangements include the issuance of warrants to real estate companies.
- Small equity investments have been made by office, retail, industrial and multifamily REITs as an initial move to share in the potential of technology/telecom companies.
- Many revenue-enhancing opportunities are being explored across all sectors.
- Spin-offs/IPOs are beginning to occur, and we are expecting additional announcements as a means for real estate companies to unlock value for shareholders. The pioneer was Reckson's spin-off of Frontline Capital. Recently, BRE announced its intentions to spin off its tech initiative VelocityHSI in 2Q 2000.
- Real estate technology start-ups exceed 200 in count, illustrating the potential within the real estate industry. The recent formation of Project Constellation is a move to consolidate and converge the real estate technology enterprises into de facto applications and technologies for use by the leading real estate companies.

Please see Figure 4 and Table 2 for a detailed timeline of the broadband service provider alliances and the e-business initiatives. We would emphasize that the management teams are very cautious in their deployment of capital into these e-business initiatives, so risk remains low, and as such, many revenue-sharing arrangements and strategic partner investments are expected to continue. These are expected to enhance NOI, creating a recurring stream of cash flow similar to revenues collected from tenants who rent space.

From our research, we think the convergence of real estate and technology should have a positive impact on all REIT sectors, with the REIT Modernization Act (RMA) enabling REITs to form taxable subsidiaries, effective January 1, 2001. According to the REIT Modernization Act, REITs may own 100% of the taxable subsidiary but the securities comprising the subsidiary may not exceed 20% of the REIT's assets. In addition, the income received by a REIT from a taxable subsidiary may not exceed 75% of a REIT's gross revenue. The taxable subsidiary is the entity in which many tenant-related services and e-business initiatives may be created without jeopardizing the REIT's status. This legislation gives latitude to real estate management teams to create services and initiatives of value to tenants. From our perspective, RMA is really providing the gateway from which new

Figure 4: DBAB REIT Index vs S&P 500 Index: 12/31/95-5/5/2000



The roman numerals are detailed in Table 2, Timeline of Broadband Service Provider Alliances and e-Business Initiatives

Source: Deutsche Banc Alex. Brown Estimates

Table 2 Timeline of Broadband Service Provider Alliances and e-Business Initiatives

I. *December, 1997:* Aimco acquired a 38% interest in Buyers Access.

II. *May 26, 1998*: Reckson Associates announced the spin-off of Frontline Capital Group (formerly Reckson Service Industries).

III. *June 22, 1998*: CarrAmerica announced an alliance with Teligent.

IV. *January 13, 1999*: Spieker Properties announced non-exclusive agreements with Advanced Radio Telecom, Teligent and Winstar.

V. *January 26, 1999*: Arden Realty formed an alliance with Teligent.

VI. *March 1999*: Equity Residential rolled out WIZ, a network-based, Web-enabled resident management system.

VII. *April 14, 1999*: Archstone Communities announced a strategic initiative with I3S Inc., which allows Archstone to offer its customers the BroadbandNOW! Service.

VIII. *April 27, 1999:* Taubman Centers announced an equity interest in Fashionmall.com of $7.4 million.

IX. *May 1999*: Post Properties announced agreements with InterQuest Communications, AT&T, Cisco Systems and Tut Systems to provide Internet services to its residents.

X. *May 12, 1999:* Equity Office and Regus Business Centers announce a non-exclusive national agreement.

XI. *June, 1999:* AvalonBay announced the development of Javalon/Trillium.

XII. *August 31, 1999:* General Growth Properties announced the introduction of its interactive Web site Mallibu.com.

XIII. September 8, 1999: Equity Office Properties announced the launch of Equity Office Access.

XIV. *October 5, 1999*: Broadband Office is formed by Kleiner Perkins Caufield & Byers, Equity Office Properties, Crescent Real Estate, CarrAmerica Realty, Duke-Weeks Realty, Hines Corp., Highwoods Properties, Mack-Cali and Spieker Properties.

XV. *October 5, 1999*: First Industrial signed non-exclusive agreements with Teligent and Newton Technologies.

XVI. *October 6, 1999*: Equity Office Properties signed a non-exclusive agreement with Captivate Network.

XVII. *November 4, 1999*: Simon Property Group unveiled its three-tiered Internet strategy, including Simon.com, Tenantconnect.com and Clixnmortar.com.

XVIII. *November 10, 1999*: United Dominion Realty signed an agreement with CAIS Internet to be the preferred ISP.

XIX. *November 15, 1999:* Taubman Centers announced the rollout of Centerlinq kiosks in its retail centers.

XX. *November 30, 1999*: Arden Realty formed an alliance with Eureka Broadband.

XXI. *December 3, 1999:* Boston Properties and Cornerstone Properties formed agreements with Cypress Communications.

XXII. *December 8, 1999*: Liberty Property Trust and Prentiss Properties teamed up with Urban Media to deliver free broadband access and e-business solutions.

XXIII. *January 24, 2000*: AMB Property made an equity interest in brandfarm.com, an online specialty retailing.

XXIV. *March 16, 2000*: BRE Properties rolled out its e-strategy and Project Velocity, a suite of Internet-based applications.

XXV. *March 22, 2000:* Glimcher Realty announced the installation of iPorts, via Omnitech Corporate Solutions.

XXVI. *April 2000:* Kimco Realty rolled out Eversave.com to 20 selected properties in the Northeast.

XXVII. *April 4, 2000*: TrizecHahn announced a one-third interest in Global Switch, with plans to build a global network of carrier hotels.

XXVIII. *April 5, 2000:* Developers Diversified Realty announced a strategic alliance with Tower Resource Management administering all telecom s access rights at DDR owned and managed shopping centers.

XXIX. *April 12, 2000*: Boston Properties signed broadband agreements with Advanced Radio Telecom and Teligent.

XXX. April 17, 2000: Phatpipe announced that it has alliances with AMB Property and Arden Realty.

XXXI. *April 19, 2000*: Captivate Networks announced that it has been selected by Boston Properties, Cornerstone Properties, Crescent Real Estate, Equity Office, Reckson Associates, TrizecHahn, Vornado Realty and others to be the exclusive provider of e-programming in nearly 500 high-rise office building elevators.

XXXII. *May 1, 2000:* ProLogis announced Customer Connect, an online customer account access service.

XXXIII. *May 3, 2000:* General Growth Prop. announced a broadband cable infrastructure agreement with Cisco Systems.

XXXIV. *May 5, 2000:* Project Constellation was announced by Simon Property, Equity Office, Equity Residential, AMB Property, Spieker Properties, Kaufman Broad & Home, three real estate service companies, a private real estate fund, and the venture capital firm Chase H&Q Capital Partners.

XXXV. *May 9, 2000:* Six regional mall REITs announced the formation of MerchantWired. The regional mall REITs who are participating include The Macerich Company, The Rouse Company, Simon Property Group, Taubman Centers, Urban Shopping Centers and Westfield America.

Source Company information

initiatives that better serve tenants may be launched. The focus for many REITs, initially the office property owners and now multifamily and retail, is wiring their properties for high-speed access, finding the right broadband network solutions to meet their various tenants' needs. From the research and surveys we have done, our view is that once a property is wired, the number of technology initiatives to be created is limitless, and positively impacts the four major property sectors:

Multifamily—Various multifamily companies have embarked on the development of proprietary applications with saleability potential while others have launched B2B initiatives. The applications include multifamily resident management systems, comprehensive Internet solutions for multifamily companies, and online procurement businesses. In conjunction with these potentially stand-alone businesses, the multifamily companies have exerted significant attention to developing content-rich customer interfaces to serve potential and existing resident bases. These community and company specific Web-sites are structured to participate in advertising revenues and e-commerce royalties. The companies most notably involved in the aforementioned initiatives include Archstone Communities (ASN), BRE Properties (BRE), AIMCO (AIV), AvalonBay (AVB), Equity Residential (EQR), United Dominion (UDR) and Charles E. Smith (SRW). In a markedly different strategic shift from the aforementioned, Equity Residential made its move by being the only multifamily company as a founding member of Project Constellation. We believe that Equity Residential's involvement in this operating company will afford them a multitude of first looks and investment opportunities in nascent real estate technology enterprises.

Retail—Clicks-and-mortar strategies are beginning to capitalize on the untapped value at existing properties. Simon Property Group (SPG) and Taubman Centers (TCO) are two mall REIT management teams leading the way with their portfolios of productive and well-located malls. Merchant Wired is the initiative being formed and involves Macerich Company (MAC), The Rouse Company (RSE), Simon Property Group (SPG), Taubman Centers (TCO), Urban Properties (URB), and Westfield America (WEA). The venture, similar in concept to Broadband Office, plans to wire buildings for high-speed access and to provide a technology infrastructure service for retail centers, addressing both the high-speed network demands of the tenants and the mall owners. Kimco Realty (KIM) is on the cutting edge of the strip centers and a first mover in introducing Lisa Carmichael, who is spearheading Kimco's e-business and broadband initiative, on its 1Q00 conference call. Taubman Centers (TCO), Simon Property Group (SPG), The Rouse Company (RSE), First Washington (FRW) and Federal Realty Investment Trust (FRT) have the portfolios of properties that we believe are best positioned as real estate and technology converge.

Industrial—The industrial property owners are addressing the intense demand for space as it relates to the fulfillment issue but cautious on underwriting standards. AMB (AMB) has formed an Internet incubator firm, similar in concept to CMGI and ICG, to learn more about the front-end and back-end of e-commerce, to better serve customers, such as Webvan, in providing fulfillment centers. ProLogis (PLD) is becoming a leader in global distribution solutions for customers, such as work with UPS to maximize its logistics infrastructure of 880,000 square feet of space in 14 locations and nine markets.

Office—The office real estate companies have entered into many revenue-sharing arrangements with telecom providers to allow access for broadband providers to wire buildings, as tenants' demands for high-speed access are burgeoning. Broadband Office was the first major move by eight office real estate companies—Crescent Real Estate (CEI), Carr America (CRE), Duke-Weeks (DRE), Equity Office Properties (EOP), Highwoods (HIW), Mack-Cali (CLI) and Spieker (SPK)—to collaborate and work to wire buildings. Subsequent alliances with broadband service providers have been formed and involve other real estate companies such as Arden Realty (ARI), Liberty Property Trust (LRY), Prentiss Properties (PP), TrizecHahn (TZH) and Boston Properties (BXP), Vornado and Reckson Associates (RA). B2C opportunities are beginning to be explored, such as Captivate Network.

Future Catalysts

BRE Properties' spin off of VelocityHSI is expected to occur in June 2000. Despite the volatility in the stock market for more speculative investments, VelocityHSI has the potential to grow at a faster rate than BRE Properties, so the spin off could result in a higher stock valuation being awarded to VelocityHSI. The spin off is expected to unlock value for shareholders, and we consider the move a positive as the viable companies that develop a track record show growing profitability and potentially become leaders in their respective niche markets. These investments could show higher stock prices over the intermediate and long-term.

The Rouse Company is kicking off the redevelopment of Fashion Show Mall in Las Vegas on May 22. This high-tech mall will be unveiled. We are anticipating a large turnout for this futuristic mall.

CEO to be announced for Project Constellation in June. The CEO will formulate a business plan and strategy to make this project seem more "real" to investors. We view the leader will be a visionary of future real estate technology opportunities.

AIMCO launch of buyersaccess.com is expected to occur in August of 2000. Buyersaccess.com will be the largest online group purchasing organization for the multifamily industry.

We believe that real estate is a platform that will evolve into a business model using digitalized information, with B2B and B2C Internet applications launched to better serve tenants and customers. Improved information flow yields a better decision-making process. As a consequence, costs are reduced and productivity enhanced. Service applications can thrive as information flow improves and knowledge of tenants and customers increases. The formation of Project Constellation is evidence of the convergence occurring and the direction in which the real estate industry is headed.

We believe the REIT management teams that are embracing the New Economy and integrating technology and using the Internet to enhance the value of their properties will not only better serve their tenants, but also be rewarded with premium net asset valuations and higher stock prices over time. The following sections detail the sector initiatives that have been announced or are in the formulation phase.

Multifamily REITs

Multifamily companies are creating community Web pages, alongside online management applications, to advance their competitive edge. BRE's spinoff of VelocityHSI is at the forefront in terms of providing a gateway to the Internet for renters. It is providing a suite of Internet applications to provide the infrastructure for smart apartments of the future.

Many of the management teams are embracing technology. Six primary initiatives relate to technology:

1. Web-based accounting and property management applications
2. On Line Virtual tours and leasing information
3. Instant credit approvals
4. B2B applications for purchasing supplies
5. Equity investments in and revenue-sharing arrangements with broadband service providers
6. Advertising sales via community Web pages, royalties from e-commerce over community Web portals.

We detail each companies' initiatives, including broadband service agreements, B2B e-applications and B2C opportunities.

In Table 9 (p. 99), the alliances formed between the broadband service providers and the real estate companies as well as the e-business initiatives that have been launched are listed.

Broadband Multifamily

Many of the multifamily companies are still in the process of determining which technology to deploy based upon the speed/cost relationship and how to structure the venture. As discussed on pages 10 to 17, with the introduction of *Broadband Network Solutions*, the primary factor which drives the decision to deploy one type of broadband solution over another is the speed demanded by tenants and the associated monthly service fees. The risk of technological obsolescence also plays an important role in the decision to create a spin off company (as in the case of BRE), outsource, or develop with technology and telecommunications companies. This directly impacts the resources required for the development of the infrastructure. As discussed in the following pages, the multifamily REITs are using multiple broadband solutions, including well-known providers such as AT&T (AIMCO) and CAIS (UDR), as well as nascent providers, including Broadband Now! (ASN). To date, BRE developed a proprietary connection to the Internet, via an ISP.

Apartment Investment and Management

AIMCO's broadband initiatives include national agreements with AT&T Broadband and Internet Service's (ABIS) as well as Comcast. In January 2000, AIMCO completed an agreement to market ABIS video and high-speed Internet services to residents at approximately 77,000 apartment units and 150,000 residents located in 18 states and the District of Columbia. In late January, AIMCO completed a national agreement to market Comcast basic cable, digital cable and Comcast@Home high-speed Internet services to approximately 40,000 apartment units and more than 90,000 residents located in 18 states. AIMCO now has over 110,000 units that are covered by marketing agreements.

Archstone Communities

Archstone was at the forefront in making the multifamily sector "wired" with the roll-out of wireless Internet access in 2Q 1999. Archstone signed an agreement with BroadBand Now! and later made a minimal equity investment. Broadband Now! provides "always-on" high-speed Internet access using multiple technology solutions, such as DSL, cable modem, and wireless solutions. Other broadband network solution agreements have been signed with major cable MSO's (1997-1998), including Time Warner and TCI. In 1997-1998, agreements were signed with major LECs (local exchange carriers), including Southwestern Bell and Pacific Bell. In 3Q 1999, a contract was finalized with AT&T for long distance. These arrangements involved revenue-sharing arrangements ranging from 6%-15%.

By year-end 2000, Broadband Now!'s Virtual Private Network (VPN) will replace Archstone's existing telecommunications network system. This is expected to create significant operating efficiencies and cost savings. We view Archstone's move to a VPN as yet another indication of its first mover status, as we foresee more intranets and extranets moving to the VPN solution.

BRE Properties

BRE's e-strategy, Project Velocity, was introduced in March 2000. BRE plans to spin off a majority interest in its newly formed Internet subsidiary, VelocityHSI, to its shareholders in 2Q 2000. The spin off is currently under SEC review. Co-engineered with many well-known technology partners, including Cisco Systems, Tut Systems, AT&T, and Microsoft, VelocityHSI is BRE's suite of Internet applications providing high speed, comparatively low-cost Internet access. The primary applications are designed for renters to provide "always-on" high-speed Internet access, a portable ISP and a personal portal. VelocityHSI also offers private dedicated LAN connections and free access to the community's intranet. With T1 speed over existing copper wires, VelocityHSI offers the same upload and download connection, in addition to data over voice capabilities. The data travels through existing copper wires in the multifamily complexes and is fully upgradable and expandable. In addition, productivity tools may be incorporated into the VelocityHSI system. VelocityHSI is an extendable model to a potential market comprising an estimated 21 million domestic multifamily units and private owners and is viewed as having global marketability.

Charles E. Smith Residential Realty

The company has found a way to create scale by working with other multifamily REITs to create a consortium. Smith would not disclose the names of the other members of the consortium, but has shared with us that the consortium is comprised of six top, like-minded public players. The consortium comprises roughly 200,000 multifamily units, and as a group, this cartel is evaluating the best broadband network solutions for its resident base. Recognizing that the key motivating factor to providers is the number of eyeballs, Smith's resident base possesses above average disposable income, positioning the company very well. Management is evaluating the potential revenue streams via relationships with Internet Service Providers (ISP) and has been able to negotiate a host of revenue-sharing arrangements beyond those tied strictly to resident subscriptions for high-speed Internet access. The common theme throughout our conversations with management is Smith's over-arching concern with the ISP's track record. The company is loathe to expose its resident base to subpar service. The revenue shares and monetization potential include: 1) revenue shares on Web-site banner ads, 2) royalties from e-tailing sales originated from the respective Web sites, and 3) warrants of the ISP versus an equity infusion. As in all other agreements that we have seen to date, the "wiring" of the consortium's properties will happen at no cost to the respective members. The consortium held a "bake-off" between six potential providers. The field has been narrowed to two ISP's, one wireless, the other cable-based. Smith, along with the other members, are hoping to announce details by the end of the summer. We believe that this announcement could be similar in concept to Broadband Office and Merchant Wired.

Post Properties

Post uses numerous telecom mediums, including wireless, DSL, T1/T3, satellite and virtual private networks (VPN). Post has chosen to affiliate with and strategically invest in nascent tech companies versus "recreating the wheel". The ventures include an equity investment in a software development venture (Trillium/Javalon), and a $1.5 million equity investment in a high-speed Internet access and network solutions provider, Darwin Networks. Darwin Networks will use a combination of fiber, wireless and DSL technologies to provide always-on, high-speed Internet access. Both Darwin and Post will develop content for each community's residential Internet portal. Post will use this system to roll out its PostSmart.net product to its communities by the end of 2000. Darwin will be the backbone for Post to run its WAN to share information between headquarters and the leasing offices, the platform for its Web-based resident management system, as well as an enabler for residents to participate in and utilize B2C lifestyle solutions.

United Dominion

As part of UDR's on-going efforts to provide its residents with an exceptional living experience, UDR entered into a revenue-sharing arrangement with CAIS Internet as the company's preferred broadband Internet Services Provider (ISP) in November 1999. CAIS is considered a Tier I ISP, receiving $200 million in capital from KKR in December 1999. The service was initially rolled out in Dallas, Houston, San Francisco and Phoenix in December 1999 and now covers all 80,000 of UDR's units in 21 states. Residents have access to the Internet at speeds up to 50 times faster than with traditional dial-up connections, and have the ability to make and receive calls on the same line simultaneously. Residents will be offered two tiers of service: 128K for $24.95 per month and 1.5 Mbps for $44.95 per month (pricing may vary according to market). The CAIS broadband solution does not require rewiring the communities as the technology uses the existing copper wires, adding switches and routers to enchance the transmission speed.

Summary

Many of the REIT management teams have begun to embrace the broadband revolution recognizing the numerous B2B and B2C opportunities. A number of the multifamily companies have signed revenue-sharing arrangements with broadband service providers, including AIMCO (AT&T), Archstone (Broadband Now!), BRE (developed Velocity), Post Properties (Darwin Networks), and United Dominion (CAIS Internet). These companies have recognized the need for high-speed Internet access to better serve their residents and are evaluating the best technologies. A notable consideration among the multifamily companies is the relationship between data transmission speed and disposable income. For example, United Dominion may be able to offer slower data transmission speed/lower cost service to its residents than Charles E. Smith. The demographic profile of a Charles E. Smith renter would appear to indicate a higher disposable income, perhaps having a higher willingness to incur higher monthly access fees.

Multifamily e-Business/Service Solutions

Multifamily companies are creating B2B and B2C initiatives such as Web-based resident management applications and community Web pages to serve their resident base, collecting advertising revenues and e-commerce royalties. The most notable of the multifamily companies include BRE, AIMCO, AvalonBay, Equity Residential, United Dominion, and Charles E. Smith.

Buyers Access

On the B2B front, in December 1997, AIMCO acquired a 38% interest in Buyers Access, as part of the NHP merger. Buyers Access is the largest group purchasing organization for the multifamily industry with over 15 years of operating experience. Buyers Access, which has historically been a catalog-based business, has been beta testing its on-line initiative, buyersaccess.com, for two months with 4 vendors and 873 properties. Revenues to date total nearly $1 million. A full launch of buyersaccess.com is scheduled for August 2000 with all 15 vendors and all properties.

Buyers Access totals over 687,000 apartment units comprising over 150 management companies. Today, over 200,000 maintenance and repair product SKUs are available through Buyers Access. In 1999, over $132 million of products was sold through Buyers Access. Buyers Access eliminates in-house purchasing departments and allows property managers to track usage and savings, monitor industry trends, and obtain answers to property-management-related questions. Most importantly, none of its competitors, including Home Depot and Maintenance Warehouse, offer the same discounted pricing.

The initial e-commerce investment was $10 million.

Horizon

Horizon is AIMCO's Web-enabled, centralized resident management operating system. System capabilities include performance indicators, such as aged vacancies, potential rental increase, lease management, and search features, including property display by owner group.

Other e-Services

Archstone

Archstone was at the forefront in making the multifamily sector "wired" with its introduction of instant on-line credit scoring with SafeRent and rapid security deposit refunds. Archstone is also servicing its 256 apartment communities, representing almost 80,000 apartment units in major cities, with Web services for prospective tenants, including on-line listings and credit checking. Additionally, Archstone is currently working on a highly sophisticated revenue management model, similar to the systems used by the hospitality and airline industries. The system is being developed for Archstone by Talns Solutions, which is a leader in this industry that developed revenue management systems for companies such as United Airlines, Marriott Hotels, National Car Rental and Ford Motor Company. More details to follow as the company moves forward with this initiative.

In addition to these e-initiatives, Archstone expects to begin testing an online leasing system at several communities in 1H 2000.

Post Properties

Early in 1Q 2000, Post launched its newly designed Web site, www.postproperties.com, with an on-line pre-leasing feature. Since the launch in January, the site has averaged 62 pre-lease approvals per week, 1.5 leases per day and has generated over $1 million in rental income. An on-line credit check function could also be added to the Web site. Post is also working on developing a customer service interface both on its Web-site and at the properties via kiosks. Post's $1.5 million equity investment in a high-speed Internet access and network solutions provider, Darwin Networks, will be used to roll out its PostSmart.net product to its communities by the end of 2000. Providing always-on, high-speed Internet access, Darwin will be the backbone for Post to run its WAN to share information between headquarters and the leasing offices, the platform for its Web-based resident management system, as well as an enabler for residents to participate in and utilize B2C lifestyle solutions. Post and Darwin will develop content for each community's residential Internet portal. In addition to the high speed Internet access, Post is also considering adding net appliances to the list of available options or amenities. The appliances will be test-marketed at some of its higher-end properties prior to a broad-based roll-out.

Charles E. Smith

Of the multifamily Web sites we have visited, Smith's appear to be the most comprehensive. The company continues to use the Web as a cost efficient, innovative method of marketing its properties. Prospective residents can view floor plans, play with furniture placement, see views from the various apartments, assess the community amenities and make appointments with the leasing agents. For example, over 50% of the residents at Courthouse Place in Arlington had their first contact with the property via the Courthouse Place community-specific Web-site. Concerning Smith's property management applications, the company has aligned itself with First American Registry to complete instant credit scores on potential residents.

Concerning on-line resident management applications, Smith is taking a fairly cautious stance and will continue to use its AMSI system that provides real-time access with a frame relay. The company is evaluating all available options, but while many of the available products look good, none have a proven track record. Despite not having an Internet-based back office function, its customer interface capabilities are among the most developed of its peers, in our opinion.

United Dominion

Javalon, was designed as a resident operating system linking financial data and reporting into one central scalable database. Other features include automating the leasing process from application to credit approval, providing virtual "tours" and automatically generating lease documents. Other features include on-line tutorials, an electronic performance support system, decision support tools, electronic task guidance, and reference information.

Additional features include a Web-based version of RentGrow, an Instant Credit Scoring system (year end 2001), all on-site kiosks and community Web sites will include on-line marketing and advertising applications, including Rent.Net, Springstreet, Apartments.com, For Rent and Apartment Guide (December 2001) with full on-line leasing capabilities for all of UDR communities by mid-2001.

Finally, UDR is exploring a number of electronic payment alternatives, including a rapid security refund feature in conjunction with the roll out of Javalon, UDR's WAN and other B2B and B2C e-commerce initiatives. UDR is currently accepting electronic deposits at some of its communities.

Near term initiatives include a Web-based procurement system to take advantage of its national buying power, rent payment on-line as well as other conducting other business transactions for products and services online.

Equity Residential

Equity Residential is a participant and founding member of Project Constellation, an entity whose collaborative skills and intellectual capital will be utilized to converge real estate and technology. The entity may acquire small and medium-sized enterprises (SMEs) that offer e-applications, e-services and/or products to the real estate industry, plus Project Constellation may create its own B2B and B2C companies - combining an Internet incubator fund with an operating company.

Javalon/Trillum

AvalonBay, in collaboration with United Dominion and more recently Post Properties, formed a software development venture, Trillium Data Solutions, to share technology ideas and to develop new e-systems. The Trillium partnership is developing a Web-based transactional and property management system, informally known as Javalon. Javalon will be the core of AvalonBay's e-strategy and is being designed to provide timely information to maximize occupancy and rental rates, improve the property management efficiencies, including the leasing staff and back office operations, the resident leasing process, enhance its ability to access portfolio-wide resident and property data, and to improve the integration of property-level reporting systems with the accounting and financial management systems of the corporate office.

We anticipate that Trillium will become a full Application Service Provider (ASP) for other REIT's and smaller apartment managers and owners.

Post completed its agreement with Trillium in April 2000. Post's initial investment in Javalon was $1 million.

VelocityHSI

BRE's e-strategy, Project Velocity, was introduced in March 2000. In 2Q 2000, BRE plans to spin off a majority interest in its newly formed Internet subsidiary, VelocityHSI, to its shareholders. VelocityHSI offers a suite of Internet applications to its residents. VelocityHSI is currently a product exclusively available to BRE residents and may be potentially extended to non-BRE multifamily properties once the spin off is complete. VelocityHSI hired Steve Carlson to be the new CEO and president. Mr. Carlson has been a recognizable leader in the multifamily industry and joins BRE with 18 years of experience with the California Housing Council and 7 years of experience with the cellular industry.

The suite of Internet applications provided by VelocityHSI serves the residents desiring a broadband lifestyle. The three primary features include:

- VelocityHSI: High speed, T1 Internet access
- ZippityKlik: Proprietary, fully portable Internet Service Provider
- KlikLANE: A customized Internet portal site

VelocityHSI provides "always on" high-speed access and connectivity to the Internet. KlikLANE is the Internet portal site that may personalized and customized by each resident who subscribes to the service. All residents have free access to their community's intranet, which features community events and access to affiliated online partners, such as Amazon.com. VelocityHSI's rationale in offering free access is to increase penetration levels of the Internet by providing a glimpse of the Internet via the apartment community's Web site. Some of the features of VelocityHSI's Internet access capabilities include video-streaming and hyperlinks from KlikLANE's portal to VelocityHSI affiliates, such as Amazon.com, Pets.com, CDNow.com and Webvan.com. Coolcast is available to all residents as part of the basic $34.95 monthly subscription fee and provides video-streaming, with television-quality news and entertainment from networks such as Bloomberg, ESPN, Disney and Fox.

Irregardless of whether a resident owns a computer, all residents will receive a set top box appliance to be connected to the resident's television, providing a basic level of connectivity with KlikLANE features. For an additional monthly charge, a net appliance is also available for use in other parts of the apartment, such as the kitchen. The management team of VelocityHSI believes that there will come a time when these counter-top, net appliance units are as ubiquitous as microwaves ovens that are considered part of an apartment's standard appliance package. In order for a tenant to have access to the Internet, the tenant pays a monthly access, or subscription, fee.

BRE Properties views Velocity as a multi-value model for residents that currently serves the San Francisco Bay area, Phoenix, Salt Lake City, Tuscon and Seattle. At present, Velocity has 1,200 subscribers. Installation costs per unit amount to roughly $120 per unit, or $30,000 per building with 250 units. BRE Properties has rolled out VelocityHSI to one-third of its portfolio, with the intention to rollout the service to the remaining communities in its portfolio by the end of the summer. VelocityHSI is expected to spend an additional $1.7 million to wire the remaining two-thirds of BRE's properties for high-speed Internet access. The benefit of the VelocityHSI Internet applications is that all of its properties will be on a common communications platform, offering residents customized Web-enabled connectivity. VelocityHSI is an infrastructure provider for smart apartments, positioning BRE at the forefront of the broadband paradigm within the multifamily sector.

VelocityHSI's Spin off Rationale
The value of the spin-off for BRE shareholders is that Velocity is anticipated to be a high growth entity, which, as an independent company from BRE, may realize its growth potential. Capital needs may be funded via venture capital firms and other sources that could translate into greater shareholder value for BRE shareholders that opt to retain the shares of Velocity. We applaud BRE for being a first mover.

On May 5, VelocityHSI filed its S-1 detailing its financials and the spin off. BRE Properties will retain a 10% minority interest in VelocityHSI. Total VelocityHSI shares outstanding are expected to total 14.7 million common shares. Please refer to Table 3 for a breakdown of VelocityHSI's spin off.

Table 3. **Details of BRE Properties' Spin Off Of VelocityHSI**

Allocation of VelocityHSI's common shares	Shares	Percent Ownership In VelocityHSI
Shares involved in spin off	11,800,000	
Shares to be issued to BRE shareholders	8,950,000	61%
Shares to be issued to BRE option holders*	740,000	5%
Shares to be issued to LLC Unit Holders*	605,000	4%
Founders' Shares (subject to vesting)	2,950,000	20%
Shares issued in connection with conversion of VelocityHSI Series A Convertible Preferred	1,470,000	10%
Total VelocityHSI shares outstanding & issuable	**14,715,000**	**100%**

*Assuming exercise
Source: VelocityHSI's S-1 filing.

The benefit of VelocityHSI to BRE shareholders is the participation in two revenue streams. 1). Subscription fees by residents that subscribe to VelocityHSI in order to receive high-speed Internet access and 2). Affiliate income (primarily "click throughs" from companies like Amazon, Pets.com and CD.com, etc.), revenue shares (from pay per view events, etc.), and advertising (primarily from local goods and service providers). In structuring BRE's preferred arrangement with VelocityHSI, BRE will receive roughly 10%-15% of the revenues on subscriptions from BRE's communities only. BRE will not be entitled to revenue shares from other customer's subscribers (other than indirectly benefiting through the 10% interest in VelocityHSI, which BRE will continue to hold.

BRE Properties' Productivity e-Tools

BRE Properties not only has the Internet services offered by VelocityHSI to better serve tenants, but also an array of productivity e-tools are being tested and rolled out to some of its communities. The three primary tools include MaketheMove.com, DirectRent.com, and Corrigo.net.

MaketheMove.com is an online utility service that allows new residents to transfer utilities, subscriptions, and postal addresses online. Based upon BRE's alliance with MaketheMove.com, BRE residents that are connected to their apartment communities' portal site, KlikLANE, is hyperlinked to MaketheMove.com. DirectRent.com functions in a similar manner. This Web site enables BRE's residents to pay rent online via a KlikLANE hyperlink.

CorrigoNet, a private company, offers productivity tools that improve the interface between residents and multifamily landlord's and maintenance/repair crews. BRE Properties has an alliance with CorrigoNet, in which BRE leases the CorrigoNet system as a service tool for BRE's residents, an empowerment tool for its employees, and a productivity tool to facilitate training, inventory and cost controls. CorrigoNet is e-connected to apartment communities' intranets as a free service. If a maintenance problem arises, the resident may report the repair request online via the community's Web site that is hyperlinked to CorrigoNet. CorrigoNet uses the Internet and personal digital assistants (PDA) technology to support apartment maintenance service requests in receiving the repair request, diagnosing the problem and recording resident feedback. The system has received overwhelming acceptance from the maintenance personnel and BRE is rolling out this service to its entire portfolio. By providing recommended solutions and the necessary tools/parts to resolve a maintenance problem, management anticipates significant time and cost savings from the system.

WIZ

Equity Residential has developed a proprietary, network-based, Web-enabled resident management system, called WIZ. Separately, Equity Residential aligned itself with three high-speed Internet providers to bring broadband access to its properties. Although management has not yet disclosed the names of the providers, it has indicated that revenue-sharing agreements and/or equity investments would be announced with one or more of the telecom partner(s) in the near future.

The WIZ Operating System

The WIZ system was built by EQR in-house and was initially rolled out in 1998 and was installed in all properties by March 1999. WIZ is a Windows-based, network-based, Internet-enabled operating platform. The software for WIZ is housed on-site at each respective property and operates on a stand-alone basis. Each evening, the company's centralized EIS (Equity Information System) operating system sweeps the property level data to aggregate and generate ROR's (Residential Operating Reports) at both the regional and national levels. Some of the many applications and capabilities of the WIZ system are for generating property management and leasing reports. All the data is compiled at the property level and regional and national reports are time-delayed by one day. The company is still testing the WIZ at numerous properties.

EQR has chosen to be non-promotional with respect to its initiatives until it has fully assessed its options. Recently, however, its was announced that EQR was a founding member of Project Constellation (discussed in detail on pages 24 to 27). Notably, EQR is the only Multifamily REIT in the original line-up. In our opinion, this is significant as it further demonstrates EQR's leadership position in the technological evolution of the multifamily sector. We expect that EQR will be a significant beneficiary of this industry collaboration through its first-look position.

Summary

As evident from these technology initiatives, we believe that the multifamily property-owners using Web-based resident management applications will continue to advance their competitive edge. A number of e-service initiatives, both B2C and B2B investments are occurring. For example, through its equity stake in Buyers Access, AIMCO is creating the largest online group purchasing organization for the multifamily industry. Buyersaccess.com is scheduled to rollout in August 2000. VelocityHSI's suite of Internet applications includes high speed Internet access, a fully portable Internet Service Provider service, and personalized portal sites, serving residents of multifamily communities. BRE's planned spin off of VelocityHSI is a move to unlock value for shareholders and to form an independent company that may have access to capital more readily than a REIT. In addition to developing WIZ, EQR's Windows-based, network-based, Internet-enabled operating platform, the company is a founding member of Project Constellation (discussed in detail on pages 24 to 27). Notably, EQR is the only Multifamily REIT in the original line-up. In our opinion, this is significant as it further demonstrates EQR's leadership position in the technological evolution of the multifamily sector. Finally, during the second half of the year. the Trillium partnership, involving AvalonBay, Post Properties and United Dominion, plans to launch Javalon, its Web-based transactional and property management system.

The Multifamily sector is well on its way to becoming wired. There are no clear winners at this point, just a handful of companies with varying degrees of first mover advantage. In our opinion, however, those companies that have not pursued an e-strategy may be at a significant disadvantage. We have highlighted those companies that have demonstrated a move to embrace the New Economy and the changing face of real estate. In our view, the winners over the long term are those companies that realize the importance of using technology to enhance the value of their real estate platform.

Retail REITs

The second sector which is realizing the potential of the Net comprises the landlords of retail real estate. Retail real estate management teams were defensive in 1999 and e-commerce fears from e-tailing IPO hype hammered retail REIT stock prices. We believe 2000 is the year of resurgence for owners of retail real estate as the potential value inherent in the properties begins to be tapped. The two forerunners in the industry have been Simon Property Group and Taubman Centers; both launched Internet strategies in 1999.

The euphoria for dot.coms is waning, especially evident in the stock prices of the e-tailers. Symbolic of the sector rotation occurring is Etoys, whose stock has stumbled to $6 from $86 due to the shift in sentiment to investing in Old Economy stocks that are using technology to strengthen their core operations while fostering relationships with tenants and customers. Year-to-date, the stock prices of the mall REITs in the DBAB REIT Index have moved up 13% as money flows gradually to established bricks and mortar companies that are working to converge their business models with technology and the changing digital landscape.

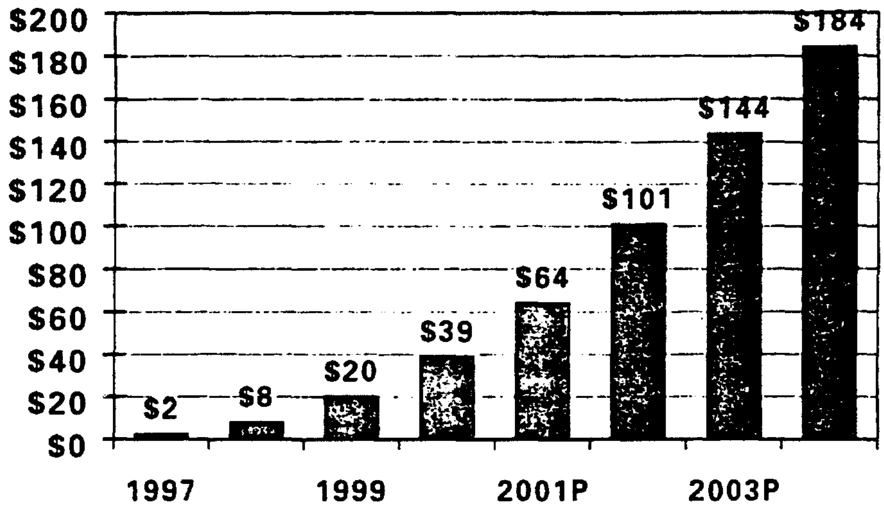
As money is plowed into e-tailing concepts and e-commerce sites, an explosion of creativity is rippling through the retailing industry. Creating relationships with shoppers and knowing how each person likes to shop represent the primary area of concentration, not only for retailers, catalog companies, and e-commerce sites, but also the retail real estate owners. Retail centers are the B&M portals for shoppers and capitalizing on this value is just beginning to occur at the more entrepreneurial and innovative companies, namely Taubman Centers and Simon Property Group, followed by Kimco Realty, The Rouse Company, Macerich Company, and Westfield America.

We believe the future holds a lot of untapped potential for many of the retail REITs, and the fear of e-commerce displacing bricks and mortar retailing was overblown.

The Truth Behind Percentage Rents And e-tailing Dollars

First, we would like to dispel the concerns regarding e-tailing sales versus bricks and mortar sales and the potential impact on retail real estate's rents. Based on e-tailing estimates by Forrester Research, e-tailing is expected to grow to $184 billion in 2004 from $20 billion in 1999. (Please refer to Figure 5.) **Based upon a 56% growth rate combined with a 5% growth rate forecast for retail sales, e-tailing could constitute 5% of total retail sales by 2004.** In 1999, retail sales were posted at $3.0 trillion, for an 8.9% increase. In terms of retail sales accounted for in shopping centers, $1.1 trillion was recorded, representing a 7.1% gain. With disposable incomes at high levels and the economy on solid footing, we believe a 5% growth rate in annual retail sales for the next five years is justified. If e-tailing sales of $184 million are excluded from the 2004 total retail sales projection of $3.8 trillion, a cumulative growth rate in retail sales moves in excess of 20%. We believe that a significant portion of e-tailing sales will cannibalize existing catalog

Figure 5: **Projected e-tailing Sales Growth ($ in billions)**



Source: Forrester Research

sales, with a sustainable portion of e-tailing to total retail sales approximating 5%-10%, in our opinion. Our concern rests with low sales per square foot retail centers, as opposed to highly productive locations.

The less often quoted fact is how diligent many retail real estate owners have been in staying abreast of the changes in retailing, modifying new lease documents to include higher base rents, relying less on percentage rents, or the sales performance of a retailer. At the Real Estate Conference Group on April 17, 2000, David Contis, the chief operating officer of The Macerich Company, commented that many new leases are being structured to include incorporate Internet sales and to handle returns at the malls. We expect future modifications in new leases and renewals to incorporate e-tailing dollars in the total sales figure of the retailer, particularly if kiosks are in the store and if the B&M retailer accepts returns. Some additional provisions could further reduce a potential hit from lower B&M retail sales.

Percentage rents represent incremental rent payable to the landlord if sales of the retailer attain a specified threshold. As retailers have been posting solid retail sales figures, landlords have commanded higher base rents and become less reliant on percentage rents. In Table 4, we have provided the annual percentage rent relative to the base rent for the retail REITs. As evident, percentage rents represents an average 3%-4% of total base plus percentage rents plus expense reimbursements for mall REITs and roughly 2.3% for strip center REITs. Percentage rents are a way to benefit in the productivity of a retailer that performs, but are generally perceived as an inflation hedge. In summary, **we view the trend to obtain higher base rents as a positive for retail real estate owners, which mutes the percentage rent impact if some sales move to the virtual realm.**

Table 4. **Percentage Rents as a Percentage of Rental Revenue 1996-1999**

Company	1996	1997	1998	1999
Regional Malls				
CBL and Associates	1.94%	2.12%	1.91%	2.41%
Crown American Realty Trust	5.37%	5.54%	5.40%	4.90%
General Growth Properties	2.59%	2.84%	3.90%	4.54%
Glimcher Realty Trust	2.56%	2.58%	2.85%	3.45%
Macerich Company	4.02%	4.25%	4.60%	4.74%
Rouse Company, Inc.	4.00%	3.73%	3.28%	2.73%
Simon Property Group	4.38%	3.87%	3.73%	3.42%
Taubman Centers	2.30%	2.44%	1.61%	1.69%
Urban Shopping Centers	4.38%	3.77%	3.84%	4.03%
Westfield America	2.60%	1.93%	3.19%	2.44%
Total Regional Malls	**3.81%**	**3.52%**	**3.43%**	**3.20%**
Strip Shopping Centers				
Acadia Realty Trust	6.49%	7.32%	4.55%	3.33%
Burnham Pacific Properties	1.42%	1.54%	1.78%	1.74%
Bradley Real Estate Trust	1.85%	1.99%	1.51%	2.21%
Centertrust Retail Properties	0.93%	1.16%	1.38%	1.50%
Developers Diversified Realty	1.52%	1.48%	1.28%	1.75%
Federal Realty Investment Trust	2.80%	2.58%	2.63%	2.58%
First Washington Realty Trust	1.71%	1.95%	2.23%	1.99%
IRT Property Company	1.01%	1.00%	0.98%	1.22%
JP Realty	5.64%	4.77%	4.17%	3.71%
Konover Property Trust	1.36%	1.45%	1.31%	1.46%
Ramco-Gershenson Properties Trust	3.17%	2.51%	2.02%	2.45%
Regency Realty Corporation	2.30%	2.41%	2.31%	1.79%
Saul Centers	4.71%	4.59%	4.04%	3.10%
Western Investment Real Estate Trust	1.38%	1.19%	1.05%	1.61%
Total Strip Shopping Centers	**2.53%**	**2.42%**	**2.14%**	**2.15%**

Source: Company Financials, Deutsche Banc Alex. Brown

If percentage rent is not as relevant a factor in weighing the future of retail real estate values, the trend in base rents should drive the value higher or lower. With this in mind, base rental rates are closely correlated with the productivity of the center, measured in terms of sales per square foot. As productivity improves, higher rental rates may be garnered as the property becomes more lucrative for retailers. Based on our research, we think that productivity will increase at retail centers that not only reinvest capital to redevelop and re-merchandise the property but also in wired retail centers where technology initiatives are evident. As a result, rental rates should rise, whereas other retail centers with no capital invested in the real estate or technology will become less competitive and less strategically positioned, and consequently rental rates could decline. We view the most vulnerable retail locations as the lower producing retail centers that are poorly positioned competitively, lag on the technology front, and are poorly capitalized. These laggards are expected to become obsolete, and we would not recommend owning stocks in those types of companies where the real estate portfolios are comprised of lower-quality properties. We believe that the productive and entertaining retail centers that create shopping experiences and are wired to the Internet speedway could realize even higher demand for space and command even higher rental rates.

Deciphering The e-tailing Myths

The quest for learning how e-tailing and bricks and mortar will converge is ongoing. In 1999, the e-tailing IPO hype focused on the notion that traditional bricks and mortar retailing channels would be forever displaced. Sites such as Boo.com (www.boo.com) which are very entertaining online shopping sites illustrate the perils of launching into e-tailing space. Boo.com requires high-speed access to utilize the 3-D renderings and zoom capabilities to see fabric quality. We believe that these tools may help a customer determine size and select a purchase; however, virtual models like mannequins in store windows do not realistically depict the shopper's image. And unfortunately, the high-speed access requirements are ahead of the technology currently deployed. At present, Boo.com's future is uncertain though the design of the site is superb in engaging the online viewer. Further testimony to the risks of e-tailing was the 1999 holiday season, when Web sites offering a breadth of products but did not necessarily deliver the products with flawless execution. As we stated in our October 1999 *Bricks and Mortar Storefronts and the Virtual Realm*, "As e-commerce is still in its nascent stages, the ease of navigation, the product offerings, the fulfillment process, returns, sales tax, packaging, shipping and delivery costs, poor screen resolution and others indicate that many unresolved issues still need to be addressed in order to advance the virtual retailing channel to the next phase in its lifecycle." The infrastructure is the critical link between the product and the customer, and the e-tailing infrastructure, especially in terms of high-speed access to the customer and fulfillment, needs work. In fact, we believe that the e-tailing infrastructure needs wired bricks and mortar for successful execution.

We believe that a synchronized multi-channel strategy by a retailer will result in the most successful retailers with the most loyal relationships with their shoppers, for three reasons: 1. The cost structure between the Internet and B&M channel favors an integration of both. 2. Inventory management systems must be linked to best serve customers, whether online or offline. 3. It is all about the experience; the virtual channel can offer comparison shopping, but virtual interaction cannot compare to the real thing.

The Costs Associated With The Internet Channel Versus B&M

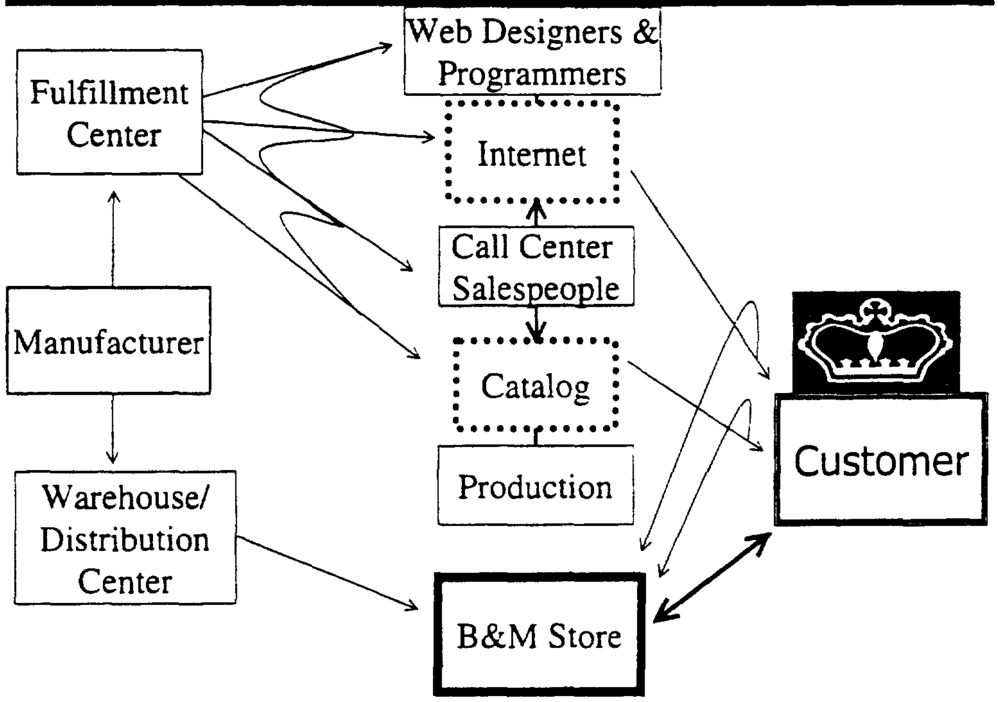
As Deutsche Banc Alex. Brown's retailing—softlines analyst, Marcia Aaron, stated in her report *Apparel Retailing on the Internet: It's All About Clicks and Mortar*, "**there is a common belief that Internet retailing will ultimately be more cost efficient than traditional brick and mortar retailing (BAM); however, we believe this case may be far overstated.** Online retailers (OLR) may require less capital for things like new stores and inventory, while operational expenses may in fact prove to be more costly...Distribution tends to be more expensive for OLR as compared with a BAM. Rather than picking items by the case pack (which requires very little human intervention), items are picked individually...We estimate that marketing expenses, as a percentage of sales, are less than 3% in the Specialty Apparel Retailing Sector. This compares with marketing expenses in excess of 50% for OLRs." *(p. 19-20).*

In attempting to analyze the expense items for the bricks and mortar store channel versus the e-tailing channel, few expense details are provided in the financials of either group of companies, but we believe that the costs of operating an e-tailing business may be extremely high when analyzed conceptually (please refer to Figure 6 for an illustration of both retailing channels). The G&A expenses, as Marcia Aaron indicated, are significantly higher for a pure e-tailer that typically requires 50% of its budget to be deployed in building a brand. The bricks and mortar model requires minimal marketing budgets due to the storefront visibility, however, B&M expenses would include labor costs for sales personnel in stores and workers at fulfillment centers who transfer boxes in bulk with minimal intervention. For the e-tailing channel, we believe that the labor costs are higher due to call center employees, who must be technically adept, not to mention the highly advanced Web designers and programmers that develop a site and maintain the accuracy and appeal of a site. In addition, the fulfillment center employees need to be more skilled in handling the inventory items and packing and shipping with any special instructions included (a return box, promotional material, gift wrapping, etc.). The customized packing and delivery expenses are incurred by the e-tailer, further increasing the operational expenses.

The other notable expense is the expense obligation in the form of rental payments if leasing space or interest expenses in the event of owning property. In this instance, the bricks and mortar channel requires space in multiple retail centers as well as space for warehouses and distribution facilities. In the e-tailing model, call center buildings, the high-tech office space for Web designers and the fulfillment facilities in close proximity to transportation hubs are essential components of the e-chain. We believe that multiple bricks and mortar locations could result in higher expenses associated with physical space, which is why we believe that retailers will become more selective over time in allocating capital expenditures to lower producing properties. High visibility and locations with significant traffic counts will be the winners, as multi-channel retailers move to rationalize costs.

The e-tailer, like Amazon.com, that transforms its business model into a multi-channel retailer could see declining marketing expenses, as storefront visibility lessens the need to build a brand. In our opinion, as the marketing expenses decline for e-tailers moving to a multi-channel retailing strategy, the bricks and mortar retailers will rationalize costs on the real estate side, with the unproductive locations realizing a drop in occupancy and rental rates. The e-tailer channel will still be confronted with very high expenses for labor due to the skill set being more advanced and the fullfillment offering customized packing. For this reason, a pure e-tailer's expense model could erode revenues very rapidly, thus explaining the need to converge the bricks and mortar channel with the e-tailing and catalog channels. In conclusion, we believe clicks and mortar will converge due to the cost structure in the e-tailing model.

Figure 6: The Addition of the Internet Channel



Source: Deutsche Banc Alex. Brown

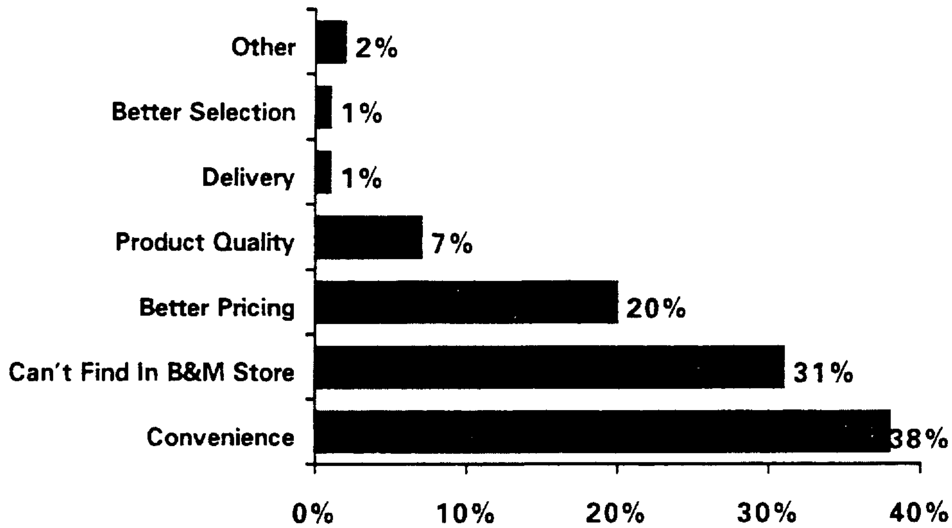
To support our conclusions, Forrester Research's studies have shown five primary areas of spending for online sites: 1). technology infrastructure, 2). site content, 3). software to guide sales process, 4). customer service and 5). marketing. We would also add the fulfillment and distribution expenses. The technology and site design and development usually consume 50% of the first year's budget, requiring roughly 30% of the ongoing budget. According to Forrester Research, marketing costs consume 20% of the initial spending but those expenses eventually balloon to 53%, which accounts for the most substantial cash requirement to maintain an online site. Other expenses include databases on customer shopping behaviors. The other critical expense is a high-tech order fulfillment infrastructure. As the 1999 holiday season proved, the fulfillment infrastructure requirements should not be underestimated. The tangible asset of the building is not the high expense item, but the labor costs in a fulfillment center where orders are customized, requiring picking and packing, in addition to potential expenses associated with technical support, handling of returns, customer service and billing inquiries. Therein lie the additional costs, reducing the profit margins of the e-tailing model.

Synchronizing Inventory Management Systems

Based upon our research and informal surveys of shoppers' buying habits, we view the retailing and e-tailing models as converging, whereby integrating bricks and mortar storefronts, Web sites and catalogs becomes crucial for a retailer's survival. In our opinion, successful retailers will have the inventory and fulfillment systems in sync so that the shoppers and buyers purchase their desired products efficiently via any channel. Results show that people shop online primarily for the convenience, 38% of the transactions, followed by a product being unavailable in a store, 31%. Please refer to

Figure 7 for a graph depicting customer preferences for shopping online. For these reasons, as customers are becoming more empowered, retailers' biggest investment should be in re-engineering inventory systems, with each retailing channel armed with information to transfer to the customer. Returns via catalogs or online purchases should be accepted and handled by existing bricks and mortar stores to relieve the customer of the hassle in filling out the return paperwork, re-packing the merchandise and going to the post office and standing in line. The bricks and mortar location could optimally evolve into the knowledge hub. In our opinion, the intersection of all inventory systems should be located in the bricks and mortar store, enabling salespeople to become knowledge workers.

Figure 7: **Main Reasons Online Is Preferred to B&M Stores**



Source: NPD Group

Even though inventory capital may be one of the biggest liabilities for a bricks and mortar retailer, the salespeople with access to digital information become knowledge workers, becoming the biggest assets of a retailer. The salespeople with direct interface to the customer should be empowered with the most information. For this reason, we believe that the bricks and mortar stores could become more valuable assets for the retailers. An integrated inventory management system, which provides real-time information of inventory levels in the bricks and mortar, e-tailing and catalog channels, arms the salespeople with valuable information to better serve the customer. These salespeople become knowledge workers (in some instances, the buyer works in the retail store further strengthening the case), possessing a general understanding of the customers' shopping patterns. With more information, the salesperson becomes a more educated buyer for the store, leading to improved inventory management. **In our opinion, the bricks and mortar shopping experience requires the biggest investment because customer retention and loyalty is strengthened via this channel.** Let us provide two examples to point out how the disconnect between retail channels may leave shoppers dissatisfied, threatening customer loyalty.

Example 1: Buying at Nordstromshoes.com

This example is an attempt to illustrate that the breadth of products available on the Internet does not necessarily match what a buyer may desire to purchase. We describe the activity as buying because a specific product is in mind. A bride selected a pair of shoes to be worn by the wedding party using the Nordstromshoes.com Web site. The recipients were dispersed in various cities throughout the United States, so ordering via the Internet seemed optimal. The shoes were a pair of Pewter Shimmer Impo heels. Everyone received the information via e-mail on the address for the shoes. Only a couple of people placed their online orders immediately. When checking the site later in the week, we clicked on Nordstromshoe.com's Frill and Fancy which linked us to the shoe site. The brand of shoes was shown, and another click sent us to the size and style site. The site offered the appropriate size and style, as the Fit Advisor tool provided assistance in sizing the shoes to our feet. When ready to place the order, the option needed in terms of size, style and color was not available. An e-mail was sent to Nordstrom's customer service online requesting a search for the shoes needed. While waiting for the e-mail reply, we placed calls to two malls where Nordstrom's was located, one in New Jersey and one in Washington, D.C. The shoe salesperson at each checked their store and their system and both responded that the style was only available online and because they could not see a picture of the shoes, no suggestions of the available shoe selection were made. But one suggested that Bloomingdale's might carry the brand and style and the other offered Dillard's. Still no e-mail from the online customer service. Since we were in New York City, we visited the Bloomingdale's store. The brand and style were not being sold at this location. A search on the inventory system was made to no avail. However, a similar styled shoe in a different brand was noticed, and the right size was in stock, so the purchase was quickly made. A day later, an e-mail was received notifying us that the shoe we wanted was no longer available, and a customer service phone number was given. The online option was a little too late. The offline experience succeeded in selling the product, but the time and effort in actually knowing what was needed and purchasing the product represented an exercise in frustration. **Optimal Solution**: The optimal solution for the buyer would have been for the Web site to have informed the buyer at the time of the failed online purchase if a Nordstrom store (with the phone number) had the shoe in inventory or if one of the Nordstrom catalogs had the product in their inventory. If none of the three channels had the product in their inventory systems, alternative but similar products should have been suggested.

Example 2: Shopping at Bergdorf Goodman On Fifth Avenue

This shows the disconnect between the offline and catalog channels. We were shopping in the shoe section of Bergdorf's on Fifth Avenue (affiliated with Neiman Marcus) and saw some Fendi mules in black linen with a bright green heel that we were interested in. The only size available was too big. The salesperson checked Bergdorf's inventory system and showed no availability. Slightly disappointed, we went home and were browsing through Neiman Marcus' The Book. On page 6, the shoe was illustrated. We called the 800 number and the shoes we wanted were available in the right size. We placed the order over the phone. **Optimal Solution**: The optimal outcome for the shopper would have been to have purchased the shoes in the store as the salesperson at Bergdorf's was able to access the catalog's inventory. Knowing and accessing the inventory of the catalog channel would have informed the salesperson that the shoes were available and could be transferred and sent to the store location.

Both examples illustrate how retailing inventory systems are not efficient, leaving many buyers and shoppers frustrated in trying to find the brand, size and style of what they want and need to purchase. We believe that the Internet offers the opportunity to succeed as a retailer by seamlessly integrating the bricks and mortar, catalog and online into one inventory management system. Offering too many channels but leaving the customer without the desired product may result in more disloyal and dissatisfied customers who have wasted time searching the various channels for the desired product. Based upon our analysis, we believe that retailers who use their bricks and mortar locations as information hubs with access to inventory sold via stores, the Internet and catalogs will cement a strong relationship with the customer, who could prove to be very loyal. We believe that the inventory management platforms, both online and offline, must be linked to best serve customers.

All three channels interface with the customer, with the bricks and mortar stores having the most powerful direct influence in building a customer relationship. In the New Economy, with high-speed access provided to retail stores, we believe salespeople may become knowledge workers, evaluating shopping patterns, provided with better inventory information, and serving the customer in a more valuable way.

It Is All About Experience

Our final rationale for believing that a synchronized multi-channel strategy by a retailer will be the profitable one is because shopping is all about the experience. Even though the virtual channel can offer comparison shopping, the virtual interaction cannot compare to the real thing. We do anticipate that future mall developments will be more engaging.

For instance, Taubman's development projects underway have themes to incorporate the culture of the community surrounding the property. Plans for International Plaza in Tampa, Florida, include colorful and spacious surroundings with Mediterranean-style architecture. The center will incorporate an open-air entertainment area called Bay Street at The Plaza. Bay Street will include 150,000 square feet of outdoor entertainment concepts and retail boutiques, plus a 300-room luxury hotel. The idea is to offer cafes with outdoor seating, fountains, live entertainment, galleries, and eclectic, exciting tenants. The theme for Bay Street interweaves New Orleans style with shuttered windows and canopies together with the liveliness and spirit of the Caribbean.

Rouse's Fashion Show Mall in Las Vegas is undergoing a major redevelopment that is expected to re-establish this regional mall in the Las Vegas marketplace. The theme for Fashion Show is a high-tech, multimedia extravaganza along The Strip where fashion may be experienced. This multi-sensory entrance will feature live fashion shows and multi-screen cybercasts are intended to link the high world of fashion along Faubourg St. Honore in Paris to the Las Vegas strip. Competing for the Las Vegas shopper is TrizecHahn's Passage to India retail center. It is referred to as a "shopping adventure" with "scenes of marketplaces where fresh foods, trinkets, and treasures are presented streetside; musicians, artisans, and acrobats dot the landscape; and pedicabs transport guests from one venue to another. Each of the destination's retail and restaurant facades has been custom designed using artifacts found during buying trips to the countries represented, such as the great market cities of Tangier, Fez, and Marrakech...arranged into a series of merchandising districts such as those that can be found in the ancient medinas and along the spice routes of North Africa, blending the architectural styles that would be encountered along a journey from the deserts of Morocco to the farthest reaches of India...the Fragrance Market...the Treasure House...the Lost City...the Sultan's Palace...and the Hall of Lamps." *(ULI, February 2000, p. 49.)* As this description suggests, the shopping experience in physical space is transporting shoppers to other worlds.

Considering the shopping experiences being created, future projects are anticipated to be more capital intensive to establish the competitive edge in a given trade area. The new projects being developed by retail real estate developers are displacing older centers. In our view, fewer dominant and productive centers represent the most ideal outcome for regional mall REITs. These retail centers are expected to be destinations, offering the experiential qualities in shopping, translating into a higher demand for space by retailers and higher rental rates. The end result, we believe, is a win-win for the owners of these properties.

Summary
Structural changes are occurring throughout the real estate industry, whereby space is being re-tooled and demand uses of space are changing. In retail, we believe that the bricks and mortar stores are the optimal channel to create the relationship with the customer. We believe that a synchronized multi-channel strategy by a retailer will result in the most successful retailers with the most loyal relationships with their shoppers.

In Table 9 (p. 99), the alliances formed between the broadband service providers and the real estate companies as well as the e-business initiatives that have been launched are listed.

Wired Retail Centers

As we elaborated upon the revolution to replace narrowband with broadband capabilities (p. 9-16), the opportunity to wire retail centers for high-speed access is beginning to emerge. Retail real estate owners view serving the tenant and shopper as paramount, which validates the rationale in deploying broadband access in all properties to advance each tenant to the next level in this Knowledge Age.

Although the question of what technology to deploy requires a thorough analysis and depends on location, tenant mix, customer demands, and cost considerations, the move to wire retail centers will gain momentum, in our opinion. Simon Property Group is leading the way among the mall REITs, forming Merchant Wired with The Rouse Company, Taubman Centers, The Macerich Company, Westfield America and Urban Shopping Centers. Kimco Realty has the first mover advantage of the strip center REITs. The rapid advancements in wired and wireless technologies, including hand-held devices, and the Internet and its multitude of e-applications are directing businesses to re-tool operating models to include information flow enabled by technology. As we highlighted in the former section, bricks and mortar stores in productive locations could be even more critical to link to the e-marketplace, to e-customer profiling systems and inventory management systems.

Regional Malls

Merchant Wired

On May 9, six regional mall REITs announced the formation of MerchantWired (www.merchantwired.com), a company that will provide a technology infrastructure service for retail centers, addressing both the high-speed network demands of the tenants and the mall owners.

According to Jim Giuliano, the gross commitment for MerchantWired is projected at $140 million, which includes $60-$70 million of leased equipment plus working capital and start-up costs. Simon will own 50% of the company, with the remaining 50% interest split among the other five mall companies. Based on these parameters, we project that the cash investment from each of the five other mall REITs could amount to $7-$8 million. Similar to Project Constellation (announced on May 4), this collaborative partnering is viewed positively—the risk profile of the venture is reduced as the capital requirement to provide this technology platform is shared.

The regional mall REITs who are participating include The Macerich Company, The Rouse Company, Simon Property Group, Taubman Centers, Urban Shopping Centers and Westfield America. With roughly 400 premier retail centers being wired by year-end 2000, MerchantWired will deploy the technology that could ultimately be the industry standard.

MerchantWired

MerchantWired plans to provide retailers with a virtual private network (VPN) offering secure managed network services, secure access to the Internet, voice over IP infrastructure in the store, redundant WAN infrastructure. This technology architecture offers retailers high-speed connectivity to their HQ, other stores, and customers in a secure and reliable environment.

Strategic partnerships were formed with Cisco Systems, IBM and Intermedia Communications to deploy the infrastructure. IBM is assisting in the design architecture of the retail technology network, essentially creating a clicks and mortar VPN. MerchantWired intends to lease the VPN from Intermedia Communications. MerchantWired will lease the network equipment and space in four co-location facilities (Atlanta, Dallas, Chicago, and the West Coast) owned by IBM. Coaxial cable will provide the backbone infrastructure in the interior of the retail centers with multiple T1 lines to each mall. This broadband technology solution was selected because of the video capabilities, attaining bandwidth speeds of 45 Mbps (similar to speeds attainable with fiber-optic cables).

The three primary benefits to the retailers are: 1). High-speed data connectivity, 2). Video and cybercasting capabilities linking clicks and mortar, and 3). Voice-over IP for communication purposes. The reliability and security of a VPN network is very advantageous. Retailers could also realize lower inventory costs, more effectively manage internal and external communication via voice-over IP telephony, improve point-of-sales transactions, install in-store kiosks and host multi-media events. Retailers will pay for this VPN service using a scalable pricing model that is based upon usage. We believe that virtual private networks will become more widespread among all industries, and the B2B and B2C e-applications that may be created from VPN technology platform could be very value-add not only for the retailers but also for the consumers. For instance, network management systems, inventory management systems, customer profiling databases, application service providers (ASP) and online/offline interfacing systems all are potential services to be offered by MerchantWired.

Jim Giuliano, who headed Simon Property Group's Tenantconnect.net strategy, is the President and CEO of this entity. Tenantconnect.net, a Simon initiative that beta-tested broadband technologies, has become MerchantWired. MerchantWired will be headquartered in Indianapolis, IN. MerchantWired is working with Cisco, IBM and Intermedia to deploy the infrastructure and to sign-up the retailers. The retailers will pay MerchantWired a service fee for usage of the VPN. MerchantWired will pay the mall owners a percentage of the service fee collected. The percentage is being determined, along with the equity ownership position of each of the five mall REITs.

Valuation

We are not modeling any service fee income assumptions from MerchantWired into any of our projections. **The importance of MerchantWired is the partnering of these six companies to create an industry platform, levering the value in existing real estate, and to provide technology solutions to better serve the retailers and shoppers.** This real estate technology company epitomizes not only the convergence occurring in the industry but also the direction in which the industry is headed, into the New Economy.

We view the MerchantWired consortium as a positive for these six mall companies, giving their properties a competitive advantage in serving retailers and shoppers. We believe these mall companies will be the future leaders. In our opinion, this partnering arrangement is another catalyst for the REIT industry and another validation that the convergence of technology and real estate is occurring.

Glimcher Realty

In addition to MerchantWired, other mall owners such as Glimcher Realty are evaluating the best broadband network solution. Glimcher's construction/development team along with operations and leasing is working to determine the most effective broadband network solution for Polaris Fashion Place. An announcement could be forthcoming by 4Q 2000 or 1Q 2001. Revenue-sharing agreements with telecom providers are an option. Other properties are being evaluated for some retrofit work to wire the retail centers.

General Growth Properties

On May 3, General Growth Properties announced plans to deploy broadband cable to its retail centers. The company has formed a strategic alliance with

Cisco Systems. Broadband cable will provide high-speed connectivity to the Internet. Retailers will be provided with video and voice communication tools on this network to offer in-store kiosks, point-of-sales terminals, video capabilities, on-line training courses, to name a few.

Summary
Though the mall owners are still formulating plans to deploy high-speed access, the futuristic retail centers that could prove to be the most productive could offer high-speed access for their tenants and shoppers to truly converge the clicks and mortar shopping experiences.

Wired Strip Shopping Centers

Kimco Realty

The strip shopping center sector is lagging the entire real estate industry in terms of wiring its properties for high-speed broadband access. At present, the lack of demand stems from the fact that local and regional tenants, in general, are not experiencing the movement to re-tool business models to provide real-time information flow. As Internet usage increases and the adoption rate rises, we expect more of these tenants to inquire and to demand wired space. In terms of the companies that are leading the way, Kimco has stated that it plans to deploy a broadband network infrastructure at its properties in order to offer just-in-time delivery options and other e-business solutions to its properties, tenants, and shoppers. Wiring shopping centers could converge the fulfillment and distribution capabilities of bricks and mortar shopping formats with e-tailing.

The other owners of strip centers are evaluating the broadband network solutions, but no other company has stated its intention to enter into revenue-sharing arrangements with telecom providers. Federal Realty is exploring broadband network solutions for its properties, considering the density of the markets served and what the tenants and shoppers need. For the intermediate term, we do not anticipate much activity in wiring properties for strip centers.

The Creation of e-Values from the Retail Real Estate Platform

In a Forrester survey, the race to build intangible assets has begun, with dot.coms focused on brand, staff, partnerships and site design as the top four priorities. Please refer to Table 5. As evident, the Knowledge Age values brands, relationships and knowledge. We believe that retail real estate companies must shift their ways of thinking to compete in this New Economy. We think that the potential creation of intangible value is the product of convergence of real estate and technology in this New Economy. In the New Economy, we believe that real estate companies have the opportunity to create intangible value---services, brands, partnerships---that warrant an additional value to the NAV. In our view, the mindset of the real estate industry is changing and moving into the New Economy, using technology to enhance the underlying value of the real estate.

Table 5 **Ranking by Dot.com Retailers as the Most Important Assets**

Brand	50%
Staff	36%
Partnerships	32%
Site Design	30%
Fulfillment Capabilities	30%
Customer Service	26%
Customer Data	24%
Content	16%
Channel Synchronization	14%
Product Offerings	6%
Technology	6%

Source: Forrester Research

Many dot.coms are struggling to survive in the fiercely competitive world of retailing. Financial pressures are creating liquidity crisis at Peapod.com, boo.com, Ashford.com, drugstore.com and down the list. Although we are still in the experimental phases of the e-volution in retailing, the trend is catering to shoppers' preferences to shop and buy products. At the forefront of these changes were Simon Property Group and Taubman Centers. Most of the mall REITs have launched Internet strategies and are creating new visions of futuristic shopping experiences. We remain bullish on the retail real estate companies that are reinvesting capital in their properties, both in terms of real estate and technology, to improve their competitive edge, thereby enhancing the future value of the property.

Investing in technology initiatives should be made prudently, ever cognizant of the risk/return profile. In fact, many revenue-generating opportunities exist whether in the form of advertising dollars, rental revenues or revenue-sharing agreements. The potential B2B e-applications are beginning to emerge, with Kimco providing a more elaborate outline of the potential. We believe that at least one individual at each company should be assigned the responsibility of spearheading technology initiatives, whether revenue generating, cost reducing or requiring capital. **Technology is not a passing fad, but we view the convergence of technology and real estate as the opportunity to create futuristic retail centers that grow in value.**

Simon Property Group

Simon Property Group—As far as Simon is concerned, the company has been leading the industry on many fronts, with its involvement in Project Constellation and more recently, Merchant Wired. Project Constellation is a watershed event for the industry, in our opinion, reflecting not only the changing mindset of some of the leaders but also how business models are being dramatically reshaped as technology infiltrates the industry. We believe Simon is one of the forerunners in adding services to better serve tenants. In fact, Simon Brand Ventures, which includes sponsorships with AT&T, Enron Energy Services, Turner Broadcasting/Time Warner, Ford Motor Company and Microsoft, accounted for $11 million in income in 1Q 2000. Annualizing the figure, services are anticipated to account for $0.23 per share, or 7% of Simon's FFO. We expect this figure to grow, and Simon may be one of the first companies where we add the intangible value for services to our tangible value (NAV) of the company.

Internally, the company has a three-pronged Internet strategy, which will move to two with the recent formation of Merchant Wired.

Simon.com involves creating Web sites for all of Simon's bricks and mortar properties. Information is available on mall events, MALLPeRKS, mall gift certificates and shopping tips. Over the next 2-3 years, MALLPeRKS could grow to an enrollment base of 10 million shoppers from 2 million at present. These Web sites are hyper-linked to tenants' Web sites too.

Tenantconnect.net is the strategy to install broadband network platforms in all its retail centers. The preliminary costs were projected at $25-$30 million, financed via the equipment provider. The objective is to offer services such as cybercasts, in-store multimedia presentations and Internet access. This project was in beta-test in 2H 1999, and the decision was made to create a separate company. Tenantconnect.net was renamed to MerchantWired, which is a consortium with five other regional mall REITs and Simon will own 50%.

Clixnmortar.com is the subsidiary that creates, develops and launches e-tailing programs that enhance the shopping experience by incorporating B&M and the virtual realm, such as Fastfrog.com, Yoursherpa.com. Both are hand-held PDA devices that enable the shopper to zap merchandise and purchase it online or offline depending on the customer's preference. Beta-tests are being conducted at the Atlanta malls.

One program is FastFrog.com that is a hand-held green personal digital assistance (PDA) device that enables the shopper to create an e-log of any desired products seen in the mall by zapping the item with the device. Over the holiday season, 8 retailers in both Mall of Georgia and Gwinnett Mall in Georgia signed-on to beta test this program. The e-log appears on the shopper's individual Web site and is meant to attract teens, which comprise a $140 billion shopper base. This program could ultimately evolve into an e-tailing model where Simon receives advertising dollars and a percentage of sales recorded by the devices.

YourSherpa.com: The second program is YourSherpa.com that is also a hand held PDA device thath enables the shopper to zap and purchase and item via the device. YourSherpa.com is being tested at Lenox Square by FAO Schwartz in Atlanta. The target shopper is the middle to higher income baby boomers that value time and convenience. Simon plans to roll-out this program to 10-20 of its most productive properties in major metropolitan markets by year-end.

The third program is also a $3 million equity investment in PIIQ.COM, which aggregates product offerings for shoppers over the Web similar to a virtual mall. The opportunity exists to alter and sharpen these programs, if necessary, to better match what shoppers want from all retailing channels.

During 4Q's conference call, Simon noted that American Online has 22 million customers and a market capitalization of roughly $125 billion, translating into each relationship being valued at $5,600, compared with

Simon's customer base of 100 million customers and a market capitalization of $6 billion, valuing each relationship at $60. Simon aims to grow its market capitalization by building a relationship model where value is determined by Simon's one-to-one relationships with customers, retailers and partners. We view all these programs as positive steps in exploring the convergence of bricks and mortar retailing and e-tailing. As evident, real estate is indeed of value and REIT management teams are just beginning to capitalize on this value.

Taubman Centers

Taubman Centers—In 1Q 2000, Taubman announced the formation of the Technology & Strategic Investment Group to consolidate efforts in utilizing technology to enhance the value of Taubman's properties, and thereby its net asset value and stock price. The division will be spearheaded by Cordell Lietz, who headed acquisitions and institutional capital. Carol Gies will work on the team considering consumer and e-commerce options. Mr. Lietz will explore and implement B2C and B2B opportunities in converging technology and real estate. There exists a multitude of partnerships and alliances that may be potentially formed. The New Economy is all about relationships and collaborative thinking. In addition, productivity may be greatly enhanced by collapsing the cycle times in the construction, leasing and development process. Similar to Mr. Taubman's view, we believe the opportunities are multiple, as it all depends on the visions of the leaders.

Taubman invested $7.4 million, or a 9.9% interest, in Fashionmall.com, LLC, a virtual mall. Fashionmall.com has a very low burn rate and cautiously spends capital to market. The company has roughly $40 million of cash on hand. Fashionmall.com is a small investment for Taubman but gives Taubman an inside perspective to e-tailing, to help explore how its bricks and mortar retailing channels may converge with e-tailing opportunities.

The Centerlinq kiosks have been rolled out to six centers and the mall Web sites are being launched. At a kiosk, a shopper creates a customer profile and receives an e-card, the electronic connection to enable online and offline shopping. Data management of customer profiles allows for targeted promotions by mall owners and retailers. **The belief is that existing B&M retailers will become 360° retailers, with e-tailing as one channel of distribution**. The objective is to customize the shopping experience to cater to each individual's shopping preferences.

Taubman is exploring both B2B and B2C Internet strategies to determine the best risk/return investments. e-tailers are being considered for storefront locations and possible signage in the malls to increase brand loyalty. JC Decaux, which is the largest street furniture and outdoor advertising company, signed a 15-year strategic alliance with Taubman. The advertising will reinforce the value inherent in Taubman's properties, and the agreement is structured as a revenue-generating alliance that may contribute a bit to 2000 results and a more significant amount to 2001. Taubman believes that 80%-90% of e-tailing dollars will be derived from existing bricks and mortar retailers. Retailers are utilizing the Internet as a way to enhance all retailing channels for their customers. In our opinion, as the retail REITs and retailers embrace the New Economy e-tailers, the potential exists for dominant and productive retail real estate to experience the strongest demand for space and to increase in value.

The Macerich Company

The Macerich Company—Other recently launched strategies include Macerich, which plans to install broadband networks in all its malls via Merchant Wired, as the demand for data transmission as well as audio and video are increasing. Cost reduction opportunities exist as systems are moved to a virtual private network (VPN). The convergence is evolving, and Macerich views Merchant Wired as a powerful relationship.

Macerich intends to roll out 47 Web sites on all its town centers this year. Many sites are used for directories, such as where to park, what is on sale, what is playing at the movies, and what is the menu at the restaurant. Williams Sonoma opened B&M storefronts to have showrooms, to create relationships with customers, do cooking demonstrations, and offer the delivery option. **The best e-commerce sites will have relationships with the customer. Shopping is a sensory and social experience and will become even more so**. Macerich is also evaluating how to create a central delivery zone to address the fulfillment issue and to evolve with e-tailing.

The company is exploring how to increase the content value in its retail properties. In summary, Macerich is working on three areas to converge the online and offline experience: 1). offering connectivity to the retailers, 2). adding convenience, with property specific Web sites, concierge programs and delivery services, and 3). increasing the content value in properties.

The Rouse Company

The Rouse Company—Rouse plans to wire its retail centers as part of the Merchant Wired consortium. From our perspective, the importance of Merchant Wired is the partnering of six real estate companies to create an industry platform, levering the value in existing real estate, and to provide technology solutions to better serve the retailers and shoppers. Rouse is one mall owner that is actively working with e-tailers, similar to DeLIA*s, which realize visibility is critical and are establishing a B&M storefront presence. The company has established Web sites and is concentrating its efforts on building its Premier Shoppers Club which has over 700,000 members. The goal is to build the membership level to one million by year-end. Rouse is creating a preferred shopping experience for its shoppers who belong to this loyalty program.

Westfield America

Westfield America—Westfield is also one of the founding members of Merchant Wired, a company that will provide a technology infrastructure for retail centers, addressing both the high-speed network demands of the tenants and the mall owners. The plan is to wire its properties for high-speed access by year-end 2000. Many benefits could accrue to the retailers and shoppers once high-speed access is installed and cybercasts and kiosks programs by retailers may be launched. Westfield is also experimenting with the introduction of a smart card for gift certificates and creating a shopper database. We view these as positive ideas and further evident that retail REIT management teams are working to converge real estate and technology.

Glimcher Realty

Glimcher Realty—Glimcher is rolling out its iPorts, interactive kiosks, throughout its mall portfolio in 2000. At present, iPorts are located in Dayton Mall and Jersey Gardens. Roughly 3-4 kiosks will be installed each month. IPorts, which are provided by Omnitech Corporate Solutions, enable retailers to target special promotions, give shoppers Internet access (for e-mail and stock quotes) and coupons, plus a shopper database is created. Revenues, in the form of base rents and percentage rents from advertisements, are being collected.

General Growth Properties

General Growth Properties— With 35 million unique visitors to its malls and 1.3 billion visits each year, General Growth is working on way to converge clicks and mortar. Charlie Graves is the Senior Vice President of the company's e-business strategies. General Growth launched its virtual mall, Mallibu.com, in August 1999. The company is working with Organic to design the site and provide front-end expertise, while working with Pandesic on the systems solutions end. We believe that the company has invested less than $3 million with this initiative. Mallibu.com has a three-level program, with the first level providing general mall information on all its 136 properties. The content is being controlled locally. The second program is to enable the retailers to provide product descriptions on Mallibu.com, and the third is to transact e-commerce on the Web site. A new version of Mallibu.com will be launched on June 1, 2000.

Kimco Realty

Kimco Realty—Kimco is on the leading edge of the strip shopping centers. During 1Q 2000's conference call, Kimco introduced Lisa Carmichael, who is spearheading Kimco's e-business and broadband initiatives. Kimco had made a minimal equity investment in Eversave.com, which is a search engine company. In April, Kimco began rolling out the Eversave.com application to 20 selected shopping centers in the Northeast. The retailers, especially the local ones, are saying Eversave.com is an affordable and user-friendly way to converge clicks and mortar. Kimco anticipates that 50% of the retailers in these centers will sign up. PC Online rated Eversave.com as the 47th fastest growing Web site in terms of number of hits. Validating our theme that real estate and technology are converging, Milton Cooper, Chairman and CEO, stated in his Annual Report, "A year ago I was concerned that the Internet might replace retailers as the principal means of selling goods. I no longer feel that way. We have been analyzing the Internet carefully, and I now feel that those retailers who have brick-and-mortar stores and an Internet strategy will be the survivors and the winners."

In terms of B2B applications, Kimco again is at the forefront in re-thinking its business processes. In Kimco Realty's 1999 Annual Report, Michael Flynn outlines the areas being considered for future B2B e-applications. The areas include: 1). national leasing and national multiple listing services, 2). daily site plan updates and occupancy statistics, 3). immediate access for retailers to Kimco's property information, 4). property sales, 5). participation in purchasing consortiums, 6). online service contract bidding, 7). financing and 8). other applications. Kimco is looking at PropertyFirst (offering 12.4 msf of commercial real estate and has one million hits to site), LoopNet (offering $67 billion in real estate for sale), Storetrax.com, Comro.com for leasing, and considering the online mortgage finance companies, online sites offering properties for sale as well as internally developed e-systems. Kimco is already aware of the opportunities presented by the Internet as it relates to real estate. Significant time, labor and money may be saved in moving many processes online, expediting the decision-making process.

Weingarten Realty

Weingarten Realty—Although Weingarten has not formally unveiled a technology strategy, the company stated it is working on strategic partnerships, especially on the B2B side where the leasing process could become more efficient. The company is evaluating strategic partnerships with Eversave.com and Storetrax.com for leasing transactions online. Storetrax.com is an online database of retail properties with interactive site plans, rents and demographics. Landlords may market their properties globally.

Management is very cautious with its capital, and we do not anticipate any equity investments to be made by Weingarten. Clearly, real estate is a very fragmented and inefficient industry where technology may create more liquidity, cost savings and efficiencies in back offices. Initially, we believe that Weingarten will be more active using technology to reduce operating costs. As our 2000 theme indicates, real estate and technology are converging, and both revenue-enhancing opportunities and cost-saving options are emerging. **The strip center REITs will be the laggards in capitalizing on revenue-enhancing opportunities and wiring their buildings.** But over time, Weingarten may develop initiatives that tap some of the value inherent in its real estate platform through various revenue-enhancing initiatives, creating an enhanced NOI stream, benefiting its tenants and shoppers.

Federal Realty

Federal Realty—Federal Realty has a dedicated person exploring technology initiatives. Lisa Denson, VP of Information Technology, is looking at a variety of technology initiatives in terms of four primary areas: 1). enhancing Federal's own Web site, 2). advertising and marketing options that are revenue-generating, 3). process-related initiatives for purchasing supplies online and 4). investment initiatives and strategic partnerships. Federal is also considering broadband network solutions for its properties, considering the density of the markets served and tenant demands.

Developers Diversified

Developers Diversified—On April 6, Developers announced a strategic alliance with Tower Resource Management (TRM) to construct telecom towers on rooftops and lease the rooftop space from DDR. The agreement also gives TRM the exclusive right to market DDR's properties to wireless telecom service providers to provide a broadband solution to wiring DDR's properties. Though this agreement is expected to add a small incremental amount to DDR's NOI in 2000, the announcement is positive as it is a further indication of a REIT management team that is thinking outside the box and is levering the real estate platform to create other supplementary services and tech initiatives to enhance NOI.

Visions for these Futuristic Retail Centers

As many of the companies have shared their visions of the future of retailing, we will share some ideas that are still in their incubator phase and yet to unfold:

1. Multimedia flat screens that are connected via high-speed Internet access to the fashion show displaying the latest styles down the catwalk live from Milan, Italy and Paris, France.
2. UPS-esque facilities that are leased on small pad sites in strip centers, offering tenants such as the local cleaners and hardware store the ability to deliver products purchased by online Customer A to Customer A's

home nearby. The products may also be picked up at the UPS-esque location.

3. B&M landlords converge with virtual landlords, which offer Web design and software expertise, data profiling management systems and fulfillment/delivery expertise.
4. A Shopper B is purchasing merchandise from an apparel boutique that taps into the shopper profiling database, which automatically via high-speed access, linked with a VPN and tapping an e-database application, sends an e-mail thanking Shopper B for visiting the store and offering a special promotion on the next store visit. The e-mail is sent simultaneously with Shopper B's credit card being approved.
5. Online and offline channels intersect to offer purchasing and delivery options wherever the shopper prefers, at home, work or at the retail center.
6. At the wired property, the Palm Pilot becomes the next-generation Palm Shopper offering the ability for Worker A to order pizza from the local strip center and have it delivered to Worker A's home as arriving from work.
7. At the wired property, the next-generation Palm Shopper enables Shopper C to scan merchandise from the local mall store, placing items on hold via online channel, until Shopper C visits the store, tries on selected merchandise and purchases apparel at the store later that same day.
8. Shopper D does not find merchandise desired at the store, so the knowledge worker, or salesperson with access to digital information, taps into the remote warehouse in real-time via high-speed access, selecting merchandise and requesting just-in-time delivery to Shopper D's residence the next day.
9. In developing retail properties, blueprints are replaced by e-pads that are utilized by leasing and construction teams to show 3-D modeling, offering real-time changes that are e-linked to building renderings and financial budgeting models. As real-time changes to e-buildings and e-documents occur, decision-making time is collapsed, reducing costs and strengthening the internal efficiencies of the development process.
10. The inventory management systems are synchronized for multichannel retailing to deliver the product to the customer from whatever venue is selected to shop.

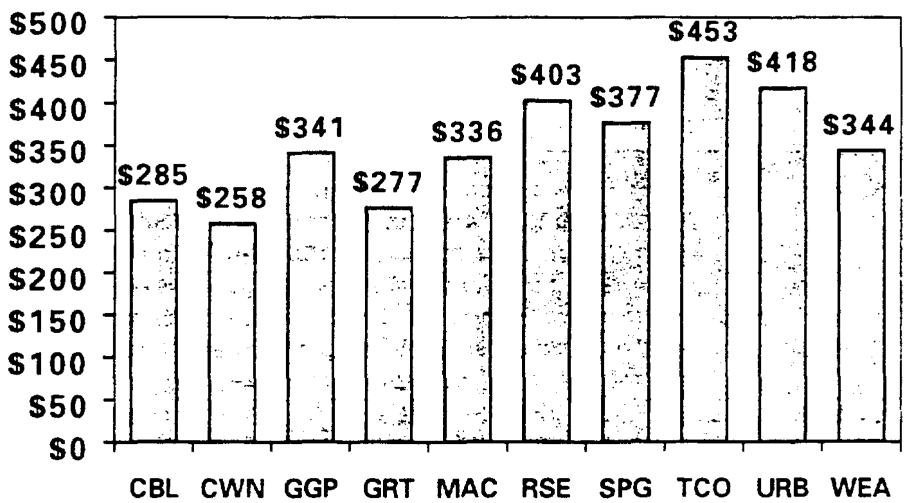
The integrated digital process could become very effective for shoppers in the time-constrained New Economy. Once the core Internet infrastructure is built in a retail center, we believe the B2B and B2C opportunities can be levered from the existing real estate platform. Value-added services and more knowledgeable retailers could result in more connected relationships with shoppers via bricks and mortar retailing, catalog and e-tailing channels.

Identifying the Winners and the Losers
In our opinion, the winners in the retail real estate realm will invest in technology to realize B2B efficiencies and B2C initiatives to become more attuned to shopping patterns of each customer and the services that are

value-additive. The New Economy is leading to more interactive and experiential shopping environments.

We believe that as the convergence evolves, a differentiation in retail values could occur, whereby some retail centers will become more valuable and others less so. As we witness many retail REITs launching Internet strategies and considering our views with regard to vulnerable retail formats, the winners, or those landlords who may realize an increase in property value over the long term could be owners of the most productive, in terms of sales per square foot, and dominant malls, with strong competitive positions, such as Taubman's The Mall at Short Hills (Short Hills, New Jersey) or Cherry Creek Mall (Denver, Colorado) where the customer wants to touch, see and try on the merchandise. In Figure 8, the productivity of each public mall portfolio is illustrated.

Figure 8: **Productivity of Regional Malls (1999 Sales Per Square Foot)**



Source: Company data

These malls should endure the competitive multi-channel environment. Main street retail locations, such as Federal Realty's Third Street Promenade in Santa Monica, CA, and Bethesda Row (Bethesda, Maryland) are expected to prevail and become vibrant and revitalized shopping areas. Santana, which is Federal Realty's new main street urban village under development in San Jose, California, is a bolder move to create the community's gathering spot via an open-air lifestyle complex, with retail, multifamily, and a hotel. Similarly, entertainment/lifestyle concepts such as Simon Property Group's Mall of America in Minneapolis and The Forum Shops of Las Vegas as well as The Rouse Company's Faneuil Hall could become even more destination-oriented, attracting customers for the leisure activities as well as the shopping. Based on our projections, we believe that many of the regional malls in public real estate portfolios are very well-positioned to capitalize on the potential untapped value of their existing real estate platform via technology.

In terms of strip shopping centers, grocery-anchored strips in prime locations or densely populated neighborhoods, such as Federal Realty's and First Washington's properties, are well-situated to battle competition from Webvan and other online grocers. These infill-located properties offer necessity-oriented items in a convenient shopping destination, in close proximity to where the shopper resides. Daily necessity stores create a gateway to the customer that can be leveraged with the Internet.

Table 6: **Simon Property Group's Productivity Profile (1999)**

Number of Centers	Sales Per Square Foot
13	> $550
38	> $400
62	> $350
45	> $300
9	< $200
Total Portfolio	**$377**

Source: Company data

From our perspective, rental rate growth and net asset value could be vulnerable at locations dominated by commodity-type retailers where space is difficult to reconfigure and at "C" quality locations where the traffic flow and productivity, or sales per square foot, slip and retailers become more selective in allocating bricks and mortar capital expenditures. Evidence of the trend to sell these properties is offered by Simon Property, which plans to dispose of eight of the nine retail properties that are recording sales per square foot below $200. Please refer to Table 6 for details of Simon's productivity profile. Simon's goal is to shuffle its portfolio to own the most productive and dominant properties. Of the 167 regional malls, 51 malls, or 20% of the portfolio, are considered highly productive. We would recommend swapping out of investments where the management team is lagging the industry in terms of developing technology initiatives. As the pace of change is occurring at such breakneck speeds, value-additive opportunities could be missed and the current option to invest small amounts of capital at low risk becomes radically different in the span of a few months. The formation of Project Constellation provides evidence that the real estate industry, similar to all industries, is inevitably headed toward the convergence of real estate and technology.

Summary

Clearly, from these initiatives and investments, retail centers are beginning to tap the surface in terms of potential cash flow associated with Internet initiatives. As Simon stated its 100 million customer base towers over AOL's 22 million customers. Based upon our research, the power of some retail properties is just beginning to be explored.

We expect many of the management teams of the retail REITs in our coverage universe will become more innovative in using technology to enhance their real estate portfolios, and thus these management teams will be rewarded with higher net asset values for these properties and higher stock valuations. Old Economy companies, such as real estate companies, are working to converge physical assets with e-businesses. The physical structure of retail real estate provides the portal from which multiple value-additive e-services, initiatives and efficiencies may be realized. The New Economy requires an innovative e-perspective.

Industrial REITs

The third sector that is being positively impacted by the New Economy and the growing importance of the Internet is the industrial sector. Industrial REITs are exploring multiple avenues to converge real estate with technology.

In Table 9 (p. 99), the alliances formed between the broadband service providers and the real estate companies as well as the e-business initiatives that have been launched are listed.

Wired Industrial Buildings

Tenants are starting to demand wired industrial sites, such as call center buildings, retail distribution facilities and fulfillment centers. In our view, the demand will gradually increase, especially as inventory management systems demand real-time information.

First Industrial

Broadband infrastructure is being deployed at industrial properties, with First Industrial the forerunner in the sector. First Industrial has formed a non-exclusive agreement with Teligent and Newton Technologies. According to the company, the agreements will give it the ability to offer a wide range of fixed wireless and wire-lined telecommunication services to its 3,500 tenants. The addition of this program gives the company's tenants choice and breadth of services in helping support their telecommunication service needs.

AMB Properties and ProLogis are evaluating various broadband service solutions. Nothing definite has been announced at this juncture.

Addressing the Insatiable Demand For Fulfillment Warehouses

The demand for distribution networks is growing exponentially, and several of the industrial REITs are working with dot.coms to provide expertise and to find locations well-suited for fulfillment facilities. According to Deutsche Banc Alex. Brown's real estate economist, Peter Muoio, "The interplay of technology, the deregulation and restructuring of the transport industries, and the increasing globalization of commerce is affecting where warehouse growth is occurring. Markets like Louisville, Dallas-Fort Worth, and even Ontario, California, have seen spurts of growth in the warehouse segment owing to UPS's central role in providing distribution and logistics to e-commerce. Similarly, Memphis and Louisville (again) are enjoying growing distribution segments because of FedEx expansions. The growth in air cargo is intertwined not only with just-in-time inventory systems, which are themselves an outgrowth of technology, but with the short product life-cycle, high value added, and lower weight of technology goods, which all fit the speed-cost profile of air cargo versus competing modes of transport. The common thread in the success of these locations is superior air cargo infrastructure and geographic location." *(Real Estate in the New Economy, April 26, 2000, p. 7)*